ZERO CALORIE FLAVORED SWEETENER

Background of the Invention

This invention relates to a novel composition which is particularly well suited for use as a flavored artificial sweetener having no calories.

Description of the Prior Art

Sweetness is a craved need and pleasure in the human diet. Sucrose is one of the most available sugars that has traditionally fulfilled that craving. One of the problems with sucrose, however, is that it is a high calorie ingredient, which often contributes to a weight problem of the person ingesting the sucrose. Moreover, certain medical conditions, such as diabetes, are implicated by the ingestion of sucrose. Artificial sweeteners therefore are popular for people who are trying to lose weight or who have problems metabolizing sucrose.

One popular artificial sweetener is saccharin. Saccharin was discovered in the late 1800s by scientists at Johns Hopkins University. Though it is widely used to sweeten many foods and beverages, it has a bitter aftertaste which can cause people to avoid it.

Another popular artificial sweetener is aspartyl-phenylalanine methyl ester ("aspartame"). Aspartame has a sweet taste with minimal bitterness for most tasters. Its onset of sweetness is slightly slower than sucrose, and the sweetness lingers, somewhat limiting its appeal to some of those people interested in avoiding the use of natural sugar.

Attempts to overcome the disadvantages of these artificial sweeteners, i.e., the persistent lingering of sweet taste, delay in perception of sweet taste, or perception of bitter or metallic aftertaste are seen in, *e.g.,* United States Patent Nos. 5,098,730 to Pepper *et al.* (composition including xylitol and a reduced calorie bulking agent); 4,758,443 to Roy *et al.* (amides of

aspartic acid and certain amides characterized by the presence of a thietanyl substituent); 4,676,989 to Barnett *et al.*(dipepetides of certain aminodicarboxylic acid esters); 4,254,154 to Eisenstadt (composition including dipeptide sweetener plus a sugar or sugar alcohol, a glycyrrhizin and cream of tartar); and 4,004,039 to Shoaf *et al.* (aspartame dispersed throughout a matrix). These patents generally attempts to provide or synthesize sweeteners having the taste of the natural sweetness of ordinary sugar.

Artificial sweeteners are widely used and are incorporated into prepared and packaged foods. Moreover, individual sized servings of artificial sweeteners are provided to the public in restaurant and other food services for use by the consumer to add to the meal or beverage being served or purchased. Ubiquitous examples are SWEET'NLOW® and EQUAL®. Until the present invention, however, consumers have not been able to conveniently, in one step, add flavorings with their sweetener to the foods or beverages they will eat or drink. The present invention overcomes the palatability problems of prior art artificial sweeteners, as well as provides new, convenient flavoring possibilities for the consumer.

Summary of the Invention

The present invention is a novel combination of dextrose, maltodextrin, aspartame, and flavoring to form a zero calorie flavored sweetener, appropriate for use in foods and beverages. Flavored sweeteners according to this invention have excellent flowability and do not discolor or clump. They can be provided in many different packaging styles, such as one-gram packages for restaurant table use, in canisters for shaking upon food or into beverages, or in bulk for commercial food applications.

Description of Preferred Embodiment

A flavored sweetening composition of the present invention can be made according to the following example.

The ingredients dextrose, maltodextrin, aspartame and flavoring are combined as follows. Dextrose and flavoring are first milled together. It is preferred to used an agglomerated dextrose such as Unidex™ which maintains the flavoring in a suitably dispersed condition within the blend. The preferred form of flavoring is an encapsulated spray dried powder such as Flavolope™, manufactured and distributed by Ungerer & Co. Suitable flavors are natural and artificial flavors such as cinnamon, peach, lemon, French vanilla, hazelnut, and mocha. Other flavors, as well as combinations of flavors, can also be utilized in the present invention.

Once the flavoring is milled with the agglomerated dextrose, maltodextrin and aspartame are dry blended with the mixture. The composition is then milled so that it is passable through a 30 mesh screen. The composition is dry packaged into suitable packing configuration. The final proportions of ingredients should be in the following approximate ratios:

Dextrose	60% - 90%
Maltodextrin	5%
Aspartame	4%
Flavoring	1% - 31%

This method provides a composition which has good flowability and does not clump or discolor and in which the aspartame stays in suspension. This composition is pourable and spoonable and is suitable for packing into, *e.g.*, one-gram paper packets, shaker canisters, and bulk packages.